Status of application

Claims 1-55 were examined and stand finally rejected in view of prior art. The prior art is discussed below in detail and Applicant respectfully requests reexamination and reconsideration for the reasons discussed below in detail.

Prior art rejection

A. Section 103 Rejection: Brown and O'Farrell

Claims 1-55 stand rejected under 35 U.S.C. 103(a) as being anticipated by US PGPub 2003/0093436 to Brown et al (hereinafter "Brown") in view of US PGPub 2005/0044164 to O'Farrell et al (hereinafter "O'Farrell"). The Examiner's rejection of claim 1 is representative:

> Referring to claim 1, Brown discloses a method for performing database operations on data obtained from a web service, the method comprising: creating at least one proxy table in a database, each proxy table mapping to a method of the web service [creating a virtual table representative of the web service] (Brown: see [0062]-[0063] and [0074]);
> in response to a database operation on a particular proxy table, converting the database operation into a format for invoking a particular method of the web service based upon the corresponding mapping (Brown: see [0049]);
> invoking the particular method of the web service (Brown: see [0057]-[0059]);
> converting results obtained from invoking the particular method into data for use at the database based upon the corresponding mapping (Brown: see [0074]); and performing the database operation on the data at the database to generate a result set (Brown: see [0075]-[0077], lines 1-2); and
> returning the result set in response to the database operation (Brown: see [0075}-[0077], lines 1-2).
>
> However, Brown fails to explicitly disclose the further limitations of generating meta data about the mapping and storing the meta data in a database table of the database and using the meta data for converting the database operation into a format for invoking a particular method of the web service based upon the corresponding mapping. O'Farrell discloses using web services to retrieve data from multiple enterprise data stores (see [0012]), including the further limitations of generating meta data [metadata 312] about the mapping and storing the meta data in a database table of the database (see [0074], lines 8-12 and Fig 3) and using the meta data for converting the database operation into a format for invoking a particular method of the web service based upon the corresponding mapping (see [0076]).

10

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the mapping structure of O'Farrell with the method of Brown by replacing the DADX files with the mapping structure. One would have been motivated to do so in order to provide a form of automation, which yields significant savings and efficiencies (O'Farrell: see [0005]).

At the outset, Applicant does not believe that the O'Farrell reference is properly considered as prior art as to Applicant's invention for the following reasons. The O'Farrell non-provisional patent application which was published as US PGPub 2005/0044164 has a filing date of December 23, 2003. This date is after the December 16, 2003 filing date of Applicant's non-provisional application. Moreover, Applicant's patent application claims the benefit of provisional application serial no. 60/320,009 (Docket No. SYB/0093.00) filed March 14, 2003. Although the O'Farrell reference also claims priority to three provisional applications filed Dec. 23, 2002 (Serial No. 60/436,230), Jan. 23, 2003 (Ser. No. 60/442,810) and Apr. 7, 2003 (Ser. No. 60/461,588), Applicant's review of these three provisional applications finds that the disclosure included in the three provisional filings appears to be very different than that found in the published version of the O'Farrell application. Although the 35 U.S.C. 102(e) date of a reference may relate back to its earliest effective U.S. filing date, <u>this requires that the prior provisional application(s) must properly support the subject matter used to make the rejection</u> in compliance with 35 U.S.C. 112, first paragraph (See e.g., MPEP §706.02(f)(1)). Accordingly, Applicant respectfully requests that the Examiner specifically identify the specific portions of the provisional application(s) filed prior to the effective date of Applicant's application that include the teachings of generating meta data about the mappings, storing the meta data in a database table and using the meta data for invoking a particular method of the web services based on the mapping for which O'Farrell is cited in the Final Rejection.

Even assuming that the O'Farrell reference is properly considered as prior art to Applicant's claimed invention (which Applicant does not concede as noted above), Applicant's invention is distinguishable from O'Farrell (as well as Brown) in a number of respects. O'Farrell's system provides for a Web services client to initiate a request to a middle tier Web service which would then retrieve data from one or more backend data stores so that views including this data may be built on a client device (O'Farrell,

11

paragraphs [0071]-[0072]; Fig. 3). In O'Farrell's system, the mapping is from data definitions from enterprise data sources to views that are used to create data stores on the client (O'Farrell, paragraphs [0075]-[0076]). In other words, the mapping described in O'Farrell is a mapping between data fields of a client device and data fields of one or more back end data sources. Additionally, it appears that this mapping is maintained at a middle tier application server (Dextera Server 314 as shown at Fig. 3 of O'Farrell) which acts as an intermediary between a client and one or more data sources.

Applicant's claimed invention, in contrast, provides for the database (not the client) to initiate a call to a Web service using the mapping. The mapping is, in fact, stored in the database and thus one does not need to rely on a file or service external to the database. Also, the mapping of Applicant's invention indicates those relational fields of the database which correspond to XML fields of a target web service (Applicant's specification, paragraph [0080]). The fact that in Applicant's invention the database initiates a Web service call is an important distinction because it enables additional processing can be done in the database that takes advantage of the inherent nature of the database (e.g., the database can do additional SQL processing). With Applicant's invention, a SQL SELECT statement may, for example, request data that is available from a remote Web service represented by a proxy table of the database. In response, Applicant's invention provides for the database to automatically take the steps necessary to invoke the Web service to obtain the requested data and map the requested data which is returned to relational fields of the database (Applicant's specification, paragraphs [0079]-[0081]). Thus, the proxy table of Applicant's invention which includes the mapping acts as a remote procedure call (RPC) handler for the database system to invoke methods of a remote Web service and return the results in relational format. O'Farrell and Brown do not include comparable features.

This also illustrates another significant difference between Applicant's invention and that of O'Farrell and Brown. With Applicant's invention the mapping is used to invoke a method of a Web service and convert the results that are obtained from the Web service back into relational format (see e.g., Applicant's claim 1). Applicant's invention creates mappings to methods of Web services and encapsulates these mappings in proxy tables that are used to represent methods of Web services (Applicant's specification,

paragraphs [0128]-[0129]). During the creation of these proxy tables, meta data about these mappings is also created and stored by Applicant's system to enable the remote Web service to be located and called in response to an operation on the proxy tables (Applicant's specification, paragraph [0091]). For example, Applicant's system creates a "Call" object for each Web method and stores the object in the "sysattributes" system table (Applicant's specification, paragraph [0087]). This meta data is used when a database operation (e.g., SQL query) on the proxy table representing the remote Web service is received to map the relational data types to the appropriate representation expected by the Web method (Applicant's specification, paragraph [0094]). Applicant's review of both the Brown and O'Farrell references find no comparable teachings. As discussed above, the mapping of O'Farrell is from data fields on a client to data fields of a back-end database (O'Farrell, paragraph [0053]). O'Farrell does not describe invoking a method of a remote Web service and converting results obtained in XML format into relational format.

Lastly, Applicant's solution automatically generates the mapping to the Web service. Applicant's solution automatically creates the mapping and generates mapping meta data which is stored for subsequent use when operations on proxy tables representing the Web service are performed. Thus, Applicant's solution automates the process of integrating a remote Web service and does not rely on input of a mapping to the remote service. Brown's system does not include this feature as it relies on a user-specified mapping file which is received as input. In O'Farrell's system, a user creates and configures views so as to map enterprise data source information with business objects on the client device (O'Farrell, paragraphs [0050]-[0055]).

All told, although O'Farrell discusses mapping meta data, the mapping it describes is distinguishable from Applicant's claimed invention in several respects. First, O'Farrell's mapping is from data fields used to create a view on a client device to data fields of a back-end database, while Applicant's solution provides a mapping from a database to a remote Web service. Additionally, Applicant's solution automatically creates the mapping based on an interface definition of a Web service, while O'Farrell relies on a user to configure views for mapping enterprise data to client devices. Moreover, O'Farrell does not use the mapping for invoking a Web service and converting

13

the results into relational format as provided in Applicant's specification and claims. Therefore, as Brown and O'Farrell do not teach or suggest all of the claim limitations of Applicant's claims 1-55 it is respectfully submitted that the claims distinguish over the combined references and overcome any rejection under Section 103. In addition, to the extent the Examiner is relying on the O'Farrell reference in rejecting Applicant's claims, Applicant respectfully requests that the Examiner point out the specific provisions of the O'Farrell provisional applications which include the supporting teachings for which O'Farrell is cited in the Final Rejection.

Any dependent claims not explicitly discussed are believed to be allowable by virtue of dependency from Applicant's independent claims, as discussed in detail above.

Conclusion

In view of the foregoing remarks, Applicant respectfully requests the Examiner to reconsider the final rejection of Applicant claims. Applicant believes that it claimed invention is distinguishable from the prior art of record and that all claims are now in condition for allowance.

If for any reason the Examiner feels that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned at 925 465 0361.

Respectfully submitted,

Date: October 15, 2007

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14